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# THE EFFICIENCY OF THE CONSOLIDATED RURAL SCHOOL

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The earliest argument in favor of the consolidation of rural schools was its economy. But experience has shown that consolidated schools cost rather more than the one-teacher schools. The more recent argument in their favor is that they are more efficient in securing educational results. This claim is for the most part based upon general appearances rather than upon actual statistical evidence.

The present writer during a visit to Delaware County, Indiana, in which consolidated schools have existed for more than a decade, and in which they are as well developed as in any other county in the country, attempted to secure some statistical data from the records of the county superintendent showing the relative efficiency of the consolidated schools of that county as compared with the ungraded one-teacher schools. The records of the office related only to attendance and scholarship as shown by the eighth-grade examinations given at the end of the school year in both graded and ungraded schools.

Attendance statistics were secured from six graded consolidated schools each having from four to eight teachers. Similar statistics were obtained from thirty-four one-teacher rural schools taken at random having an aggregate attendance about equal to that of the six consolidated schools. The yearly term for most of these schools was one hundred and forty days. Where the length of the term varied slightly from this number, as in a few cases, the figures were reduced to the 140-day basis.

The average number of days attended by each student was, in the consolidated schools, 111.1 days; and in the ungraded rural schools, 107.1 days, a difference in attendance of four days in favor of the consolidated schools. In the latter the pupils attended on

an average 79.4 per cent of the time; while in the ungraded schools they attended 76.5 per cent of the time, a difference of 3 per cent in the average record of attendance. If this difference were uniformly distributed through the grades, it would be too slight to be of significance.

The attendance was then studied by grades in order to see whether the consolidated schools tended to hold the pupils better during the latter grades of the elementary school courses. The results are shown by Table I.

TABLE I  
ATTENDANCE BY GRADES

Grade	1	2	3	4	5	6	7	8
Average attendance in consolidated schools.....	98	111	110	113	111	120	123	120
Average attendance in ungraded schools.....	96	105	110	111	111	115	107	109
Difference in favor of consolidated schools.....	2	6	0	2	0	5	16	11
Percentage of attendance in consolidated schools.....	70	79	79	81	79	86	88	86
Percentage of attendance in ungraded schools.....	68	75	79	79	79	82	76	78
Difference in favor of consolidated schools.....	2	4	0	2	0	4	12	8

This table shows that the attendance is not appreciably different for the first five grades but that the attendance during the sixth, seventh, and eighth grades is much better in the consolidated schools than in the one-teacher schools. The attendance in the seventh and eighth grades is from 8 to 12 per cent better than in the corresponding grades of the ungraded schools; and, at the same time, it is altogether probable, though we have no figures at hand upon this point, that the consolidated school has also held a larger proportion of its pupils during the seventh and eighth grades. If this is the case, this means a double gain in favor of the consolidated school for the grammar grades. This is significant since one's serious education for adulthood scarcely begins before the seventh grade.

The figures indicate that the consolidated school is more attractive to the students of the grammar grades than is the ungraded

school. This is perhaps due to the greater variety of the work that can be offered, which is coming to include manual training, domestic science, elementary agriculture, nature-study, drawing, and music—a series of activities that can be directed very inadequately in the usual one-teacher school. Further, the consolidated schools offer a better stepping-stone for the high school. The township high school is usually in the same building. Naturally the pupils are made familiar with the nature of a high school, a thing not possible in a one-teacher ungraded school.

On the side of scholarship the records of the county superintendent's office showed the result of the final eighth-grade examination given at the end of the school year to those who had finished the work of the elementary school. The questions were prepared in the office of the state superintendent and were therefore uniform for all the schools of the county. The grading was done in the office of the county superintendent and therefore the grading was uniform throughout the county. The examination results are therefore altogether comparable in all the schools.

In grading the papers of the pupils in the superintendent's office, arithmetic was first marked; and if anyone failed in arithmetic the remaining papers were not marked. For this reason the arithmetic series was the only complete series that could be obtained for that county.

The average grade in arithmetic for the candidates from the consolidated schools was 77.7 per cent. The average grade of the candidates from the ungraded one-teacher schools was 76.7 per cent. These figures are for all practical purposes identical. The distribution of the students along the percentage scale in the two classes of schools is also practically identical as shown by Table II.

The figures seem to indicate that in arithmetic, at least for this particular year, the efficiency of the consolidated schools is no greater than that of the ungraded one-teacher schools.

In the consolidated schools 61 students took the final examinations; of these 45 passed and 16 failed. The percentage successful was 73.8 per cent. In the ungraded schools 71 students took the final examinations; of these 52 were successful and 19 failed.

The percentage successful was 73.2. The percentages of successful students in the two classes of schools are the same.

This equality in the percentages of successful students in the uniform eighth-grade examinations in both kinds of schools appears to indicate that what is true for arithmetic is true of every other study covered by the examinations. The scholarship produced by the two types of schools is not appreciably different.

One ought, however, to know the average ages of the pupils. It is not improbable that the graduates of the ungraded schools were considerably more mature than those of the consolidated schools. Also a study of the relative elimination of pupils is necessary; it is possible that the graduates of the ungraded schools were somewhat more of a picked lot than those of the consolidated schools.

TABLE II  
FREQUENCIES OF THE DIFFERENT GRADES

GRADES	NUMBER OF STUDENTS		PERCENTAGE OF STUDENTS	
	Consolidated	Ungraded	Consolidated	Ungraded
I—10.....	0	0	0.0	0.0
11—20.....	2	1	3.7	1.5
21—30.....	1	2	1.9	3.1
31—40.....	1	2	1.9	3.1
41—50.....	1	2	1.9	3.1
51—60.....	2	3	3.7	4.4
61—70.....	10	12	18.4	18.4
71—80.....	8	10	14.9	15.4
81—90.....	12	13	22.2	20.0
91—100.....	17	20	31.4	31.0
	54	65	100.0	100.0

Although the present study is based upon the figures for the greater part of a county, and that a county in which the movement is as well developed as anywhere in the country, yet the quantity of data is insufficient for conclusions. If more extended studies should arrive at the same results, many of the more substantial claims of the defenders of the movement would be nullified. Thus it is urged, for example, in the *Report of the Commissioner of Education of Ohio* for 1908 that, among other things, consolidation "insures a much better average daily attendance, and greatly

reduces the cases of tardiness"; "gives an opportunity for better classification of the schools and grading of pupils"; "encourages supervision"; "limits the field of the teacher's work and thus permits better preparation"; "gives few classes to each teacher and longer recitation periods"; and "secures better teachers." These, however, are not ends in themselves, but only means to an end. If they do not secure improved educational results, they do not constitute arguments in favor of consolidation.

The foregoing considerations are presented in no critical spirit. The writer is of the opinion that the many problems of rural education are not to be solved without consolidation, grading, and division of labor. But the argument to be used in promoting the movement must be other than the cost per school child, or the ability of the pupils to pass examinations in arithmetic, geography, and history.

The writer recently visited two agricultural counties, lying side by side and similar in all important respects. In one of these counties a progressive county superintendent had brought about consolidation in half the schools of his county. In the other county, a conservative superintendent had blocked all of the efforts of the advocates of consolidation with two simple arguments: consolidated schools are more expensive per capita; and they produce no greater scholarship as shown by the uniform state examinations. The writer doubted the accuracy of the superintendent's figures; and to test the matter, took the data above mentioned from the records of a county in which consolidation has been looked upon favorably and has been given opportunity to prove its worth. Contrary to expectations, the figures appear on their face to support the contentions of the conservative superintendent.

It is on the basis of such arguments as these that the major portion of our rural population and also the major portion of their school officials oppose the consolidation movement. In many places where the movement has attained considerable growth, it is coming to be looked upon with some disfavor by former supporters, since it seems to be neither cheaper nor more efficient. The argument appears to them to be based upon accurate mathematical considerations, and to be incontestable.

The method of measuring results by examination in the standard subjects, however, and by mere count of individuals, leaves out of consideration a number of essential matters. The examinations referred to above are drawn up to meet the needs of ungraded schools and fail to measure many of the most important results secured by graded schools. In the latter there is 30 to 40 per cent more time given to recitation, discussion, shop and field work under the teacher's immediate direction. In the proportion that a pupil's work with the teacher is better than study periods, to that degree must the graded work secure better results. And yet, the examinations may be so designed that the extra results do not reveal themselves in the percentages received in the textbook subjects.

Social conditions also are demanding many subjects that can be given only in graded schools. All rural schools, for example, should teach agriculture and household science. In order that the teacher have the necessary vocational attitude of mind, there must be a man for the one subject and a woman for the other. While a young lady teacher in an ungraded school might teach textbook agriculture in such a way as to enable her pupils to pass the state examination in proper form, yet the actual results would undoubtedly be far inferior to those secured by a special teacher of agriculture in a consolidated school. The situation would be just reversed in the case of the teaching of household science. Efficient rural education cannot be accomplished without at least two teachers for each school.

Another result not measured by the examination tests is the social education that comes from belonging to a large school community of two hundred children and eight teachers, both men and women, rather than to a small district community of twenty-five children and one teacher. If the "country-life movement" is ever to check the stream of migration from farm to city, it must provide social education and social opportunities of an attractive sort for the rural youth. It must socialize the country; and the consolidated school appears to be a long step in this direction.

Other desirable results not measured by the examination are: (1) the greater number of pupils held through the eighth grade; (2) the greater number directed into the rural high school, a necessary

preliminary to the dissemination of agricultural information through the country; (3) the improved health conditions of pupils, due to more sanitary buildings and equipment and better opportunities for efficient medical inspection.

The purpose of this brief sketch is to show the apparent soundness of the argument so frequently used to block the movement for consolidation; and to indicate the ways in which it is essentially unsound because of its leaving out of consideration a number of matters which are probably as important as the intellectual content acquired from textbooks in the so-called standard subjects.